Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for a service provider on a
private network to provide a service for an external client on an
external network to access a service provider on a private
<pre>network via a gateway bridging the private and external networks,</pre>
including the service provider carrying out the steps of the
service provider having a virtual name that is bound by a first
binding to the address of the gateway on the external network
and by a second binding to the address of the service provider
on the private network, the method comprising upon the client
using the virtual name to access the service provider:
- allocating a virtual name to the service provider;
making the virtual name available to a client on the
external network;
binding the virtual name to the routing address of the
gateway on the external network; and
- binding the virtual name to the routing address of the
service provider on the private network

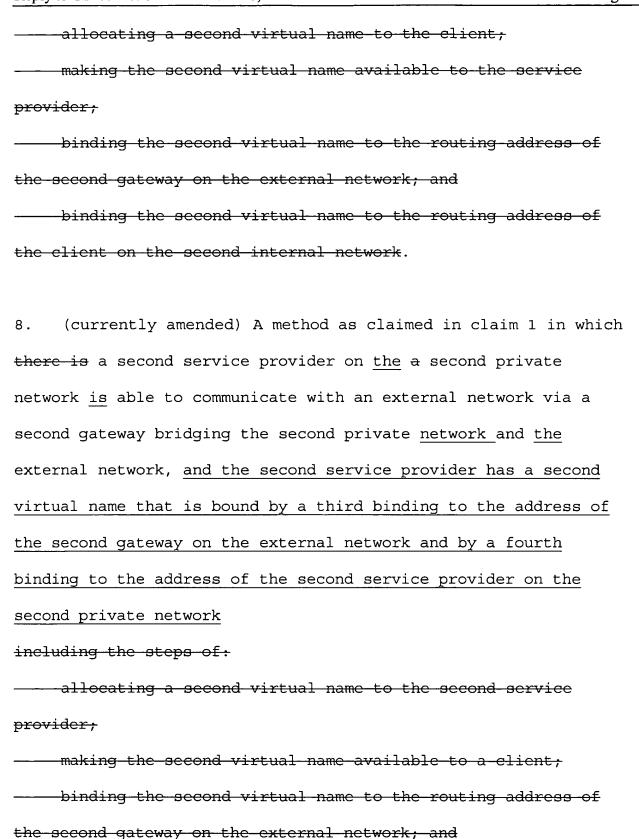
using the first binding to enable the client to contact the gateway and thereby setting up a first session between the client and the gateway; and

using the second binding to enable the gateway to contact
the service provider and thereby setting up a second session
between the client and the service provider, the second session
being nested in the first session between the client and gateway
such that second-session data is encapsulated in first-session
data and is forwarded by the gateway between the client and
service provider.

- 2. (currently amended) A method as claimed in claim 1 in which the first and second bindings are held on virtual name is bound to the routing address of the gateway and the routing address of the service provider by way of an external domain name server and a private domain name server, respectively.
- 3. (currently amended) A method as claimed in claim 1 in which the first binding is held on an external domain name server, and the second binding comprises a first part held by an internal naming service of the gateway and mapping the virtual name to a real name of the service provider, and a second part held by the external domain name server and mapping the real name of the

service provider to its address on the private network virtual name is bound to the routing address of the service provider on an internal naming service.

- 4. (original) A method as claimed in any preceding claim in which the external network includes the internet.
- 5. (cancelled)
- 6. (currently amended) A method as claimed in claim 1 [[5]] in which the first and second sessions are both secure sessions with their data being messages communicated between the client and the service provider are encrypted.
- 7. (currently amended) A method as claimed in claim 1 in which the client is on a second <u>private</u> <u>internal</u> network distinct from the <u>private</u> <u>internal</u> network of the service provider, and a second gateway bridges the second <u>private</u> <u>internal</u> network and external network, and the client has a second virtual name that is bound by a third binding to the address of the second gateway on the external network and by a fourth binding to the address of the client on the second private network the method including the steps of:



-- binding the second virtual name to the routing address of the second service provider on the second private network.

9. (currently amended) A method as claimed in claim 1, in which the external network includes a further private network containing the private network of the service provider and there is a further gateway bridging the further private network to the portion of the external network which is external to the further private network, and wherein the method including the additional steps of:

binding the virtual name is bound by a third binding to a routing address of the further gateway on the portion of the external network which is external to the further private network.

- 10. (currently amended) A method of providing access to a server on a private network from an external client on an external network via a gateway bridging the private and external networks, the gateway supporting tunnelling of second messages to said server by encapsulating them in first messages routed to the gateway[[;]], the method comprising involving:
- (a) allocating a virtual name to the server and mapping it by a first mapping to the routing address of the gateway on the

external network and by a second mapping to the routing address of the server on the private network;

- (b) at said external client, using the virtual name to address a said first message and a said second message, the former encapsulating the latter;
- (c)—using the first mapping to route the first message, with its encapsulated second message, to the gateway; and

 (d)—using the second mapping to route the second message extracted at the gateway from the first message, to the server.
- 11. (original) A method as claimed in claim 10 in which said first messages are encrypted.